UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

ANNUAL COMPLIANCE REPORT

for

PUBLIC WATER SYSTEMS

in the

DISTRICT OF COLUMBIA

for

CALENDAR YEAR 1999

Customer Service Hotline: 1-800-438-2474

INTRODUCTION

The Drinking Water Program: An Overview

The EPA established the Public Water System Supervision (PWSS) Program under the authority of the 1974 Safe Drinking Water Act (SDWA). Under the SDWA and the 1986 and 1996 Amendments, EPA sets national limits on contaminant levels in drinking water to ensure that the water is safe for human consumption. These limits are known as Maximum Contaminant Levels (MCLs). For some regulations, EPA establishes treatment techniques in lieu of an MCL to control unacceptable levels of contaminants in water. The Agency also regulates how often public water systems (PWSs) monitor their water for contaminants and report the monitoring results to the States or EPA. Generally, the larger the population served by a water system, the more frequent the monitoring and reporting (M/R) requirements. In addition, EPA requires PWSs to monitor for unregulated contaminants to provide data for future regulatory development. Finally, EPA requires PWSs to notify the public when they have violated these regulations. The 1996 Amendments to the SDWA require public notification to include a clear and understandable explanation of the nature of the violation, its potential adverse health effects, steps that the PWS is undertaking to correct the violation and the possibility of alternative water supplies during the violation.

The SDWA applies to the 50 States, the District of Columbia, Indian Lands, Puerto Rico, the Virgin Islands, American Samoa, Guam, the Commonwealth of the Northern Mariana Islands, and the Republic of Palau.

The SDWA allows States and Territories to seek EPA approval to administer their own PWSS Programs. The authority to run a PWSS Program is called primacy. To receive primacy, States must meet certain requirements laid out in the SDWA and the regulations, including the adoption of drinking water regulations that are at least as stringent as the Federal regulations and a demonstration that they can enforce the program requirements. Of the 57 States and Territories, all but Wyoming and the District of Columbia have primacy. The EPA Regional Offices administer the PWSS Programs within these two jurisdictions. Thus, the EPA Region III Office, in Philadelphia, PA, administers the PWSS Program in the District of Columbia.

The 1986 SDWA Amendments gave Indian Tribes the right to apply for and receive primacy. To receive primacy, a Tribe must meet the same requirements as a State. To date, no Tribes have been granted primacy. Currently, EPA administers PWSS Programs on all Indian lands.

Annual State PWS Report

Primacy States submit data to a federal data system called the Safe Drinking Water Information System (SDWIS/FED) on a quarterly basis. Data include PWS inventory statistics, the incidence of Maximum Contaminant Level violations, Major Monitoring violations, and Treatment Technique

violations, and the enforcement actions taken against violators. The EPA Regional Offices report the information for Wyoming, the District of Columbia, and all Indian Lands. Regional offices also report Federal enforcement actions taken. The annual compliance reports that States are required to submit to EPA will provide a total annual representation of the numbers of violations for each of the four categories listed in section 1414(c)(3) of the Safe Drinking Water Act reauthorization. These four categories are: MCLs, treatment techniques, variances and exemptions, and significant monitoring violations. This report is based largely on data retrieved from the federal version of the Safe Drinking Water Information System (SDWIS/FED). Appendix A of this report contains a table which summarizes possible MCL, treatment technique, and monitoring/reporting violations.

DEFINITIONS

Public Water System

A Public Water System (PWS) is defined as a system that provides water via piping or other constructed conveyances for human consumption to at least 15 service connections or serves an average of at least 25 people for at least 60 days each year. There are three types of PWSs. PWSs can be community (such as cities and towns), nontransient noncommunity (such as schools or factories), or transient noncommunity systems (such as rest stops or parks). For this report when the acronym "PWS" is used, it means systems of all types unless specified in greater detail. **There are two community PWSs in the District of Columbia: 1) the Washington Aqueduct Division of the U.S. Army Corps of Engineers; and, 2) the District of Columbia Water and Sewer Authority.**

Maximum Contaminant Level

Under the Safe Drinking Water Act, the EPA sets national limits on contaminant levels in drinking water to ensure that the water is safe for human consumption. These limits are known as Maximum Contaminant Levels (MCLs). **During calendar year 1999, no MCL violations occurred at either PWS in the District of Columbia.**

Treatment Techniques

For some regulations, the EPA establishes treatment techniques (TTs) in lieu of an MCL to control unacceptable levels of certain contaminants. For example, treatment techniques have been established for viruses, bacteria, and turbidity. **During calendar year 1999, no treatment technique violations occurred at either PWS in the District of Columbia.**

Variances and Exemptions

Although variances and exemptions to specific requirements under the Safe Drinking Water Act Amendments of 1996 may be granted under certain circumstances, EPA has never issued any variances or exemptions to the public water systems in the District of Columbia. **Thus, during calendar year 1999, no violations of variances and exemptions occurred at either PWS in the District of Columbia.**

Monitoring

A PWS is required to monitor and verify that the levels of contaminants present in the water do not exceed the MCL. If a PWS fails to have its water tested as required, then a monitoring violation occurs. A monitoring violation also includes failure to report test results correctly to the primacy agent.

Monitoring for most chemical contaminants is done at the point(s) where water from the water treatment plant(s) enters the water storage and distribution system. The exceptions are trihalomethanes, lead and copper which are monitored at specific locations in the distribution system. Monitoring for bacteriological contaminants is conducted at specific sites in the distribution system. **During calendar year 1999, no monitoring violations occurred at either PWS in the District of Columbia.**

Significant Monitoring Violations

For this report, significant monitoring violations are defined as any major monitoring violation that has occurred during the specified report interval. A major monitoring violation (except for the Surface Water Treatment Rule) occurs when no samples were taken or no results are reported during a compliance period. A major Surface Water Treatment Rule M/R violation occurs when fewer than 10% of the required samples are taken or no results are reported during a reporting interval. A minor violation occurs when some but not all of the required numbers of samples are taken. **During calendar year 1999, no significant (nor minor) monitoring violations occurred at either PWS in the District of Columbia.**

DISTRICT OF COLUMBIA INFORMATION

Public Water Systems in the District of Columbia

There are two public water systems in the District of Columbia: 1) the Washington Aqueduct Division of the U.S. Army Corps of Engineers (the Aqueduct); and, 2) the District of Columbia Water and Sewer Authority (DC WASA). The Aqueduct owns and operates two water intakes on the

Potomac River in Maryland, two water treatment plants in the District of Columbia, and three finished water storage reservoirs. The Aqueduct is a water wholesaler, and as such, has no distribution system of its own. Its primary customer is DC WASA, which owns and operates eight finished water storage facilities and the water distribution system within the District. (It should be noted that prior to the creation of DC WASA on October 1, 1996, the water distribution system was owned and operated by the former Water and Sewer Utility Administration (WASUA) which was part of the District of Columbia Department of Public Works.) In addition to DC WASA, the Aqueduct supplies water to three customer PWSs in the Commonwealth of Virginia: Arlington County, the City of Falls Church, and Washington National Airport. These customer water systems are regulated by the Virginia Department of Health which has primacy for implementation of the PWSS Program in the Commonwealth. For reference in SDWIS, these five water systems are listed below along with their PWS identification numbers:

DC0000001	Washington Aqueduct
DC0000002	District of Columbia Water and Sewer Authority (as of October 1, 1996; prior name was the District of Columbia Water and Sewer Utility Administration)
VA6013010	Arlington County Department of Public Works
VA6013080	National Airport
VA6610100	City of Falls Church Department of Public Utilities

In addition to supplying water to the District, the Aqueduct provides significant assistance to DC WASA in complying with the monitoring and reporting requirements of the SDWA. The Aqueduct collects and provides analytical services for all of the required entry point samples, which satisfies the requirements for itself as well as its customer PWSs. In addition, the Aqueduct collects and analyzes all of the bacteriological and trihalomethane samples required for DC WASA's distribution system. Responsibility for compliance with lead and copper monitoring is split between the Aqueduct and DC WASA. DC WASA arranges for the collection of lead and copper samples at customers' taps and the Aqueduct laboratory provides the analyses. The Aqueduct collects and analyzes the distribution system samples required for the assessment of optimal corrosion control treatment.

The Aqueduct compiles the results of the analyses into monthly monitoring reports for DC WASA and itself . The Aqueduct submits its report directly to EPA Region III. DC WASA uses the data provided by the Aqueduct to prepare the report it submits tp EPA Region III. DC WASA periodically prepares and submits its own report of lead and copper sampling at its customers' taps.

Previous SDWA Violations in the District of Columbia

The drinking water regulation known as the Total Coliform Rule (TCR) requires each PWS to collect monthly samples from representative sites in its distribution system for testing for the presence of coliforms. Every coliform positive sample must also be tested to determine if is positive for fecal

coliform or *E. coli*. Every coliform positive sample must also be followed by additional repeat samples. The number of samples collected each month is dependent on the size of the population served. In the District of Columbia, a minimum of 210 samples must be collected and analyzed each month. A routine monthly violation of the TCR occurs if more than 5 per cent of the samples collected in a particular month are found to be total coliform positive. An acute violation of the TCR occurs if a total coliform positive sample is found to also be positive for fecal coliform or *E. coli*, and if any of the repeat samples are also coliform positive. (An acute violation can also occur if the initial sample is only coliform positive and any of the repeat samples is fecal coliform or *E. coli* positive.)

In the fall of 1995 and the summer of 1996, WASUA incurred several routine monthly and one acute TCR MCL violation. In addition, a sanitary survey of the District's water storage and distribution system conducted earlier in 1995 found numerous operational and maintenance deficiencies in the system. In response to these events, EPA Region III issued a notice of violation and proposed administrative order in November 1995 which directed WASUA to develop short and long term plans to correct the deficiencies. EPA Region III then began negotiating a final consent order with WASUA to finalize the plans for remediation and for upgrading the water storage and distribution system. Negotiations were completed and the order signed in July 1996. WASUA exceeded the TCR monthly MCL, i.e., more than 5% of samples collected monthly were coliform positive, during June, July and August 1996. However, neither WASUA nor its successor DC WASA had additional MCL violations during the last four months of 1996 and no violations at all during calendar years 1997, 1998 and 1999. Meanwhile, DC WASA has continued to implement its remediation plan and to submit quarterly progress reports to Region III as required by the administrative order. Region III staff have continued to work closely with Aqueduct and DC WASA staff to upgrade the system.

In summary, both the Washington Aqueduct and the District of Columbia Water and Sewer Authority had no SDWA violations during calendar year 1999.

PWSS Program Activities in the District of Columbia

EPA Region III's Water Protection Division works closely with the Washington Aqueduct and DC WASA in the implementation of the PWSS Program in the District. The Region has provided, and is continuing to provide, services to the District such as the following:

- Training for water treatment plant and distribution system operators.
- Training for distribution system maintenance and repair personnel.
- Sanitary surveys of the water treatment, storage and distribution systems.
- Sanitary surveys of several large water users in the District.
- Drinking water survey of day care centers in the District.
- Assistance to the DC Department of Health in conducting a source water assessment of the Potomac River.

C Technical assistance to the Aqueduct and DC WASA as needed.

During calendar year 1999, Region III assisted the Aqueduct and DC WASA in developing plans for the issuance of the District's first Consumer Confidence Report (CCR), which was delivered in August 1999. Region III also worked with the Aqueduct, DC WASA, and the Virginia customers in developing a communication plan to notify the public and specific target audiences about the Aqueduct's planned conversion of its secondary disinfectant from free chlorine to chloramine. The construction needed to make the conversion began during calendar year 1998 and the change over is scheduled for November 2000.

Additional information about the PWSS Program in the District, or extra copies of this report may be obtained by contacting:

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Copies of the Annual Compliance Reports for Public Water Systems in the District of Columbia for Calendar Years 1997, 1998, and 1999 may also be found on the web at: